

In the Claims:

Please amend the claims as follows.

1. (currently amended) A middle distillate selective hydrocracking catalyst composition which comprises a metal hydrogenation component selected from the group of metals consisting of molybdenum, tungsten, cobalt, nickel and combinations of two or more thereof supported on a carrier comprising an amorphous binder component and from 2 to 80% by weight, based on the total weight of the carrier, a zeolite of the faujasite structure having a unit cell size in the range of from ~~24.40 to 24.40 Å~~24.14 to 24.38 Å, a bulk silica to alumina ratio (SAR) above about 12, ~~and~~ a surface area of at least about 850 m<sup>2</sup>/g as measured by the BET method and ATSM D 4365-95 with nitrogen adsorption at a p/po value of 0.03, and a micropore volume of at least about 0.28 ml/g.
2. (currently amended) A composition as claimed in claim 1, wherein the zeolite has a unit cell size in the range of from ~~24.44~~24.24 to 24.38 Å.
3. (original) A composition as claimed in claim 1, wherein the zeolite has a SAR in the range of from about 20 to about 100.
4. (original) A composition as claimed in claim 1, wherein the zeolite has a surface area of at least about 890 m<sup>2</sup>/g.
5. (currently amended) A composition as claimed in claim 1, wherein the zeolite has a micropore volume of ~~at least about 0.28 ml/g~~greater than 0.30 ml/g.
6. (original) A composition as claimed in claim 1, which further comprises a second zeolite.
7. (original) A composition as claimed in claim 6, which further comprises in the range of from 1 to 5 %by weight of zeolite beta, basis total carrier.
8. (original) A composition as claimed in claim 1, which further comprises a binder.
9. (currently amended) A hydrocracking catalyst composition which comprises a metal hydrogenation component selected from the group of metals consisting of molybdenum, tungsten, cobalt, nickel and combinations of two or more thereof supported on a carrier comprising a high surface area zeolite of the faujasite structure, wherein said high surface area zeolite is made by a process which comprises
  - a) hydrothermally treating a starting zeolite of the faujasite structure having a silica to alumina molar ratio in the range of from about 4.5 to about 6.5, and an alkali content of less than about 1.5 %wt; at a temperature in the range of from 600°C to 800°C, and at a partial pressure of steam in the range of from about 0.2 to about 1 atmosphere for a

time effective to produce an intermediate zeolite having a unit cell size of from 24.30 to 24.45 Å;

- b) contacting said intermediate zeolite with an acidified solution comprising an acid and optionally an ammonium salt under conditions effective to produce said high surface area zeolite having a unit cell size in the range of from 24.10 to 24.40 Å, a molar silica to alumina ratio of greater than about 12 and a surface area of greater than about 850 m<sup>2</sup>/g thereby producing the high surface area zeolite; and
- c) recovering said high surface area zeolite.

10. (currently amended) A process for the conversion of a hydrocarbonaceous feedstock into lower boiling materials, which comprises contacting the feedstock with hydrogen at elevated temperature and pressure in the presence of a hydrocracking catalyst composition which comprises a metal hydrogenation component selected from the group of metals consisting of molybdenum, tungsten, cobalt, nickel and combinations of two or more thereof supported on a carrier comprising an amorphous binder component and from 2 to 80% by weight, based on the total weight of the carrier, a zeolite of the faujasite structure having a unit cell size in the range of from ~~24.10 to 24.40 Å~~ 24.14 to 24.38 Å, a bulk silica to alumina ratio (SAR) above about 12, and a surface area of at least about 850 m<sup>2</sup>/g as measured by the BET method and ATSM D 4365-95 with nitrogen adsorption at a p/po value of 0.03, and a micropore volume of at least about 0.28 ml/g.

11. (original) A process as claimed in claim 10, which is carried out at a temperature in the range of from 250 to 500°C and a total pressure in the range of from 3 x 10<sup>6</sup> to 3 x 10<sup>7</sup> Pa.

12. (previously presented) A composition comprising:  
a first zeolite of the faujasite structure having a first zeolite unit cell size in the range of from 24.24 to 24.38 Å; a bulk silica to alumina molar ratio in the range of from 20 to 100; and a surface area of at least 850 m<sup>2</sup>/g.

13. (previously presented) A composition as recited in claim 12, further comprising:  
a metal hydrogenation component selected from the group consisting of nickel, cobalt, molybdenum, tungsten, platinum and palladium.

14. (previously presented) A composition as recited in claim 13, further comprising:  
a second zeolite selected from the group consisting of zeolite beta, ZSM-5 and zeolite Y having a second zeolite unit cell size greater than 24.40 Å.

15. (previously presented) A composition as recited in claim 14, further comprising:

an amorphous binder component selected from the group consisting of alumina, silica, silica-alumina, and mixtures thereof.

16. (previously presented) A composition as recited in claim 15, wherein said first zeolite is present in said composition in amount up to 90 weight percent and said second zeolite is present in said composition in an amount up to 20 weight percent, wherein said weight percents are based on the total sum weight of said amorphous binder component, said first zeolite and said second zeolite; and wherein said metal hydrogenation component is present in said composition in the range of from 2 to 40 parts by weight (calculated as metal) per 100 parts by weight of the total composition.

17. (currently amended) A middle distillate selective hydrocracking process, comprising:  
providing a feedstock comprising hydrocarbons boiling in the range of from 330 °C to 650 °C;

contacting said feedstock in the presence of hydrogen at an elevated temperature and an elevated pressure with a middle distillate selective hydrocracking catalyst composition comprising a first zeolite of the faujasite structure having a first zeolite unit cell size in the range of ~~below 24.40 Å~~ from 24.10 to 24.40 Å; a bulk silica to alumina molar ratio in the range of greater than 12; and a surface area of at least 850 m<sup>2</sup>/g; and

yielding a middle distillate product comprising middle distillate hydrocarbons boiling in the range of from 150 °C to 370 °C.

18. (previously presented) A process as recited in claim 17, wherein said middle distillate selective hydrocracking catalyst composition further comprises a metal hydrogenation component selected from the group consisting of nickel, cobalt, molybdenum, tungsten, platinum and palladium.

19. (previously presented) A process as recited in claim 18, wherein said middle distillate selective hydrocracking catalyst composition further comprises a second zeolite selected from the group consisting of zeolite beta, ZSM-5 and zeolite Y having a second zeolite unit cell size greater than 24.40 Å.

20. (previously presented) A process as recited in claim 19, wherein said middle distillate selective hydrocracking catalyst composition further comprises an amorphous binder component selected from the group consisting of alumina, silica, silica-alumina, and mixtures thereof.

21. (previously presented) A process as recited in claim 20, wherein said first zeolite of said middle distillate selective hydrocracking catalyst composition is present in said composition in

amount up to 90 weight percent and said second zeolite of said middle distillate selective hydrocracking catalyst composition is present in said composition in an amount up to 20 weight percent, wherein said weight percents are based on the total sum weight of amorphous binder component, first zeolite and second zeolite; and wherein said metal hydrogenation component of said middle distillate selective hydrocracking catalyst composition is present in said composition in the range of from 2 to 40 parts by weight (calculated as metal) per 100 parts by weight of the total composition.

22. (previously presented) A process as recited in claim 21, wherein said elevated temperature is in the range of from 250 °C to 500 °C; said elevated pressure is in the range of from  $3 \times 10^6$  to  $3 \times 10^7$  Pa; and said hydrogen is present in an amount such that the hydrogen partial pressure is in the range of from  $4 \times 10^6$  to  $2.5 \times 10^7$  Pa; and the space velocity is in the range of from 0.1 to 10 kg of said feedstock per liter of said middle distillate selective hydrocracking catalyst composition per hour ( $\text{kg} \times \text{l}^{-1} \times \text{hr}^{-1}$ ).

23. (previously presented) A hydrocracking catalyst composition as recited in claim 9, wherein said unit cell size of said high surface area zeolite is in the range of from 24.24 to 24.38 Å and said bulk silica to alumina ratio is in the range of from 20 to 100.

24. (previously presented) A hydrocracking catalyst composition as recited in claim 23, wherein said metal hydrogenation component selected from the group consisting of nickel, cobalt, molybdenum, tungsten, platinum and palladium.

25. (previously presented) A hydrocracking catalyst composition as recited in claim 24, further comprising:  
a second zeolite selected from the group consisting of zeolite beta, ZSM-5 and zeolite Y having a second zeolite unit cell size greater than 24.40 Å.

26. (previously presented) A hydrocracking catalyst composition as recited in claim 25, further comprising:  
an amorphous binder component selected from the group consisting of alumina, silica, silica-alumina, and mixtures thereof.

27. (previously presented) A hydrocracking catalyst composition as recited in claim 26, wherein said high surface area zeolite is present in said composition in amount up to 90 weight percent and said second zeolite is present in said composition in an amount up to 20 weight percent, wherein said weight percents are based on the total sum weight of said amorphous binder component, said high surface area zeolite and said second zeolite; and wherein said

metal hydrogenation component is present in said composition in the range of from 2 to 40 parts by weight (calculated as metal) per 100 parts by weight of the total composition.

28. (new) A hydrotreating catalyst composition as recited in claim 9, wherein said starting zeolite has a unit cell size in the range of from 24.60 to 24.78 Å.

29. (new) A hydrotreating catalyst composition as recited in claim 28, wherein said unit cell size of said intermediate zeolite is in the range of from 24.35 to 24.45 Å.

30. (new) A hydrotreating catalyst composition as recited in claim 29, wherein said alkali content of said starting zeolite is less than about 1 % wt.